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XVII. An Account of the Death of a Person destroyed by Lightning in the Chapel in Tottenham-Court-Road, and its Effects on the Building; as observed by Mr. William Henly, Mr. Edward Nairne, and Mr. William Jones. The Account written by Mr. Henly.

March 24, 1772.

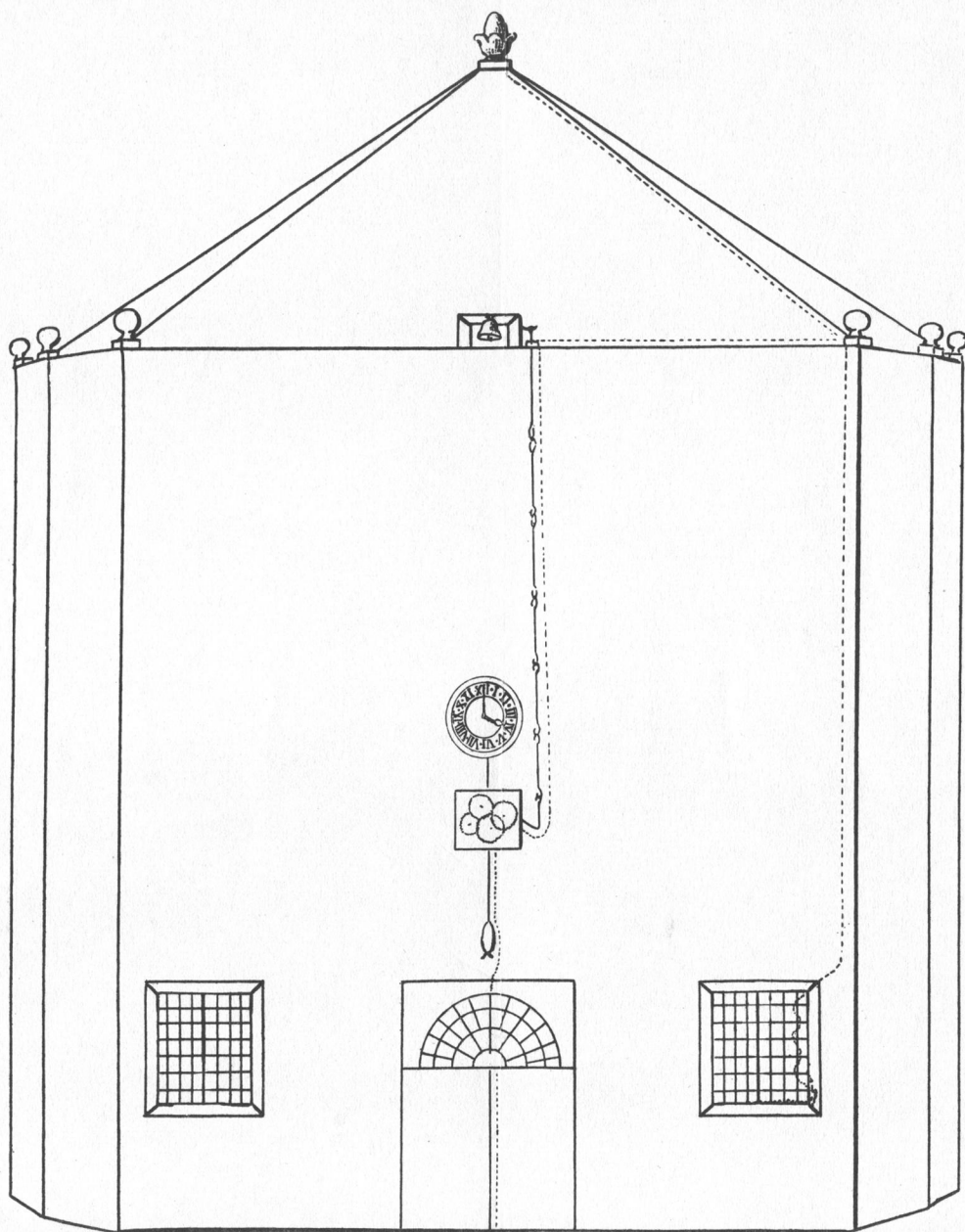
Read April 9, 1772. **O**N Sunday last, exactly at 4 o'clock, P. M. part of a building erected by the late Rev. Mr. Whitfield, in Tottenham-court-road, commonly called the Chapel or Tabernacle; was struck by a flash of lightning. This part was an addition afterwards made to the original structure, but was greatly inferior to it in height. On its summit stood an ornament representing a pine-apple carved in wood, which consisted of two pieces; the uppermost being connected with the lower by means of several iron spikes. It was supported by a strong plinth of wood covered with lead lapped over the edges and corners of its top, and there secured by large iron nails. This lead work was connected with that which covered the hips, and made a regular communication of metal, to the bottom of the flating, where it united with a leaden gutter which extended

S 2

quite

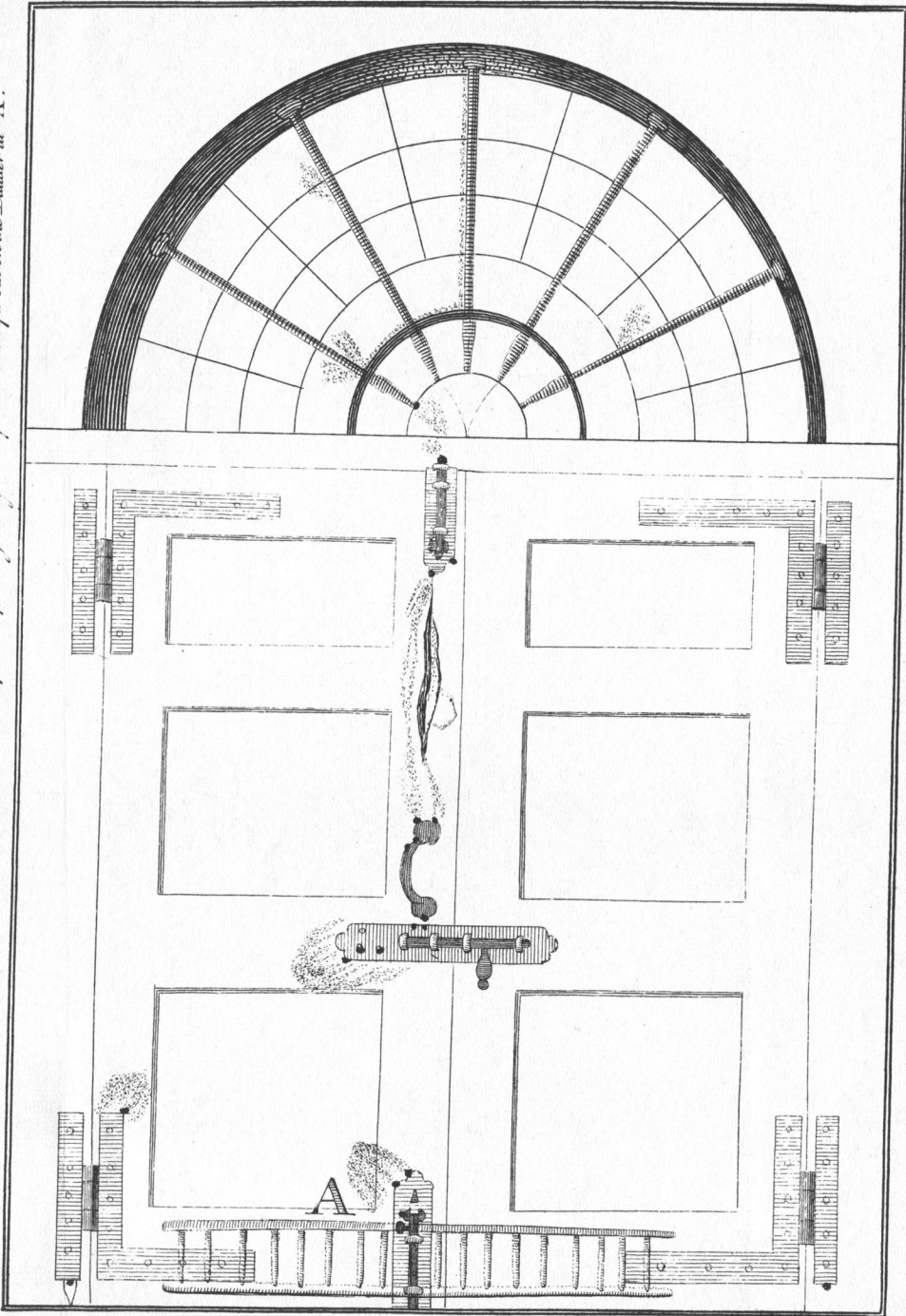
quite round the building. In this gutter was erected a small lanthorn, in which hung the bell of the clock. A little pipe of lead was foldered to, and extended perpendicularly a few inches above the surface of the gutter; through this pipe went a small iron wire consisting of many long links, connected with the tail of the hammer; passing thence within a few inches of the striking rod of the clock, to which it was tied by a strong hempen string 6 inches or more in length. The lightning first struck the pine-apple, the upper part of which it shivered into very small fragments, and threw them in all directions from the place, and melted off the end of one of the spikes. It left a smoky track upon the under-part of it, and then struck the edge of the lead upon the plinth, which it melted in two places, quite through the substance of it. A little below these I found a third spot; this was melted in a very regular and curious concave about an $\frac{1}{4}$ th of an inch diameter at the surface, with a small perforation at the bottom, through which I think might have been introduced one of the finest sort of sewing needles. The whole figure somewhat resembled a small funnel *. It passed thence by a regular communication of metal, till it reached the wire of the clock hammer before spoken of, melting it about half through its diameter, which, in this place, was less than the twelfth part of an inch. The edge of the lead pipe from which it leaped to the wire was also much melted. The wire was melted at every juncture of the links; the packthread at the bottom was but little injured, but the electric matter leaped through

* Quere, is not this a token of the stroke's being from the clouds downwards?



An outside view of that part of the Building which was affected by the Lightning. —
V.B. The dotted Line represents the course the Electricity took in its passage to the Earth.

An inside view of the Door & Window.
 The dots on the Iron work & the five strokes represent the marks left at those places by the Lightning. The person destroy'd sat on the Ladder at A.



a few inches of air to the striking rod of the clock, in which, near the end, it melted a large spot, whence it was conducted by the work of the clock to the upper part of the pendulum, in the axis of which it melted another large spot, and descended by the rod passing over the ball, which it melted in a most remarkable manner in six or seven places (perhaps upon the ball it might accumulate, and, for want of a proper conveyance, break out in different parts of it) and quitted it at the bottom of the nut, which is melted in three places, and will accompany this paper. Here the electricity leaped through eight inches of air, or passed in conductors of the worst kind, dry brick and wood (with a considerable cavity between them), till it reached the frame of a window, over the doors, where it broke the ceiling, and burnt the wood to a coal. Here it met with the point of a nail, driven upward into the window frame as a security to the center bar. The point of this nail is melted off, I suppose, full half an inch; it was also melted in two large spots on the opposite sides near the head. My friend Mr. Jones drew it from the bar, &c. This gentleman was also so obliging as to take down a sketch of the window, and an outline of the parts affected of the building. [See Tab. VII.] The nail is now in the custody of Mr. Nairne. The lightning passed down the aforementioned bar, and by a bent iron (in contact with both), into another bar, whose point (which was greatly melted) came much nearer the upper bolt of the door. The lead-work, from the point of the bar was melted, and a board nearly in contact with the staple of the bolt much blacked by the passing of the electricity.

Here

Here it struck the upper edge of the staple, which projected a little above the top of the bolt, melted it in a most extraordinary manner; the spot, and indeed several others, having run into a kind of spiral form, which is raised considerably, as may be plainly distinguished by a very shallow magnifier, and often, as in this, by the naked eye. This effect was first observed by Mr. Nairne. When it quitted this bolt, it struck upon a semicircular handle of iron (first tearing out a large piece from the door), the upper part of which hath three melted spots, besides a single one at the upper edge of it. But, in quitting it, the electricity melted only one spot at the lower edge *, which I think, as Mr. Bell (a gentleman who was with us) observed, was a criterion whereby to judge of the direction of the fluid. To the left of this door, at the distance of eleven feet four inches, came down a leaden pipe, which terminated at the ceiling, and there just entered a pitched trunk of fir (which indeed was the case with every leaden pipe about the building). Here the lightning exploded, rending the trunk, and doing other slight damage in and about a window, to which it was attracted by an interrupted and irregular communication of metal. I would beg leave to remark, that, had this pipe of lead been continued to the bottom of the building, and thence conveyed into the earth, in the manner directed by Dr. Franklin, I can have no doubt but the whole contents of the explosion would have passed this way, have been

* Quere, is not this effect somewhat analogous to Mr. Lullin's electrical experiment with a card?

conducted with perfect safety to the building, &c. and that no other part of it would have been at all affected. As the effects of this stroke so exactly correspond with those many times before observed by Dr. Franklin, I think we shall scarce ever meet with a greater proof of the utility of his metallick conductors; and cannot help expressing a sincere wish, that builders, and persons engaged in the erection of public edifices, &c. might be prevailed with, to make a regular communication of metal, from the top of such buildings to a considerable depth into the earth, and of such a diameter and kind, as may be sufficient to secure both the buildings, and the lives of those, who may happen to be in them. The poor man destroyed by this accident, was sitting at the time on a short ladder, which lay horizontally on the pavement, with his back against the door. The lightning flew from the middle bolt, and struck him on and under his left ear, entered his neck, making a wound half an inch long, raised in a bur and burnt, passed down his back, which it turned black as ink, down his left arm, melting the stud in his shirt sleeve; the stone in which, as well as the silver, seems to be a little affected. Hence it flew into his body, which it burnt in a hard spot, resembling scorched leather, passing through it into his right leg, and breaking out a little above the ankle; making a large wound, and another bur, burnt as before, with two others smaller a little below it, and some still smaller in his feet. His cloaths and hair were much burnt, but his stock, shoe, and knee-buckles, the metal buttons on his coat and waistcoat, a shilling, which he had in the left

left pocket of his breeches, and the metal clasps of a Common Prayer-Book, in his coat-pocket, were all uninjured *. His death was truly instantaneous ; he hath left a widow and two children in distressed circumstances, who were entirely dependent on his labour. His name was Goodson, aged thirty-four, by trade a taylor, at N° 3. Craven-Buildings, Drury-Lane.

P. S. The studs above-mentioned will be sent together with this paper (as a curiosity) for the inspection of the members of the Royal Society.

* The corps, after lying two or three days on a table, seemed not more disposed to putrefaction, than bodies at that time generally are, which die a natural death.